

**Amendments to the Claims:**

Please amend claim 1 as set forth below. This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A gait monitoring system for monitoring gait characteristics of a subject, said system comprising:  
a sensor module touching the upper surface of a floor that detects at least one of floor acceleration, floor vibration, and floor deflection to provide acceleration, vibration, and deflection signal, wherein the subject walks on the upper surface of the floor in proximity to said sensor module; and  
a processor module that analyzes the acceleration, vibration, and deflection signal for determining gait characteristics.
2. (Previously Presented) The system of claim 1, further comprising: an output module for receiving data indicative of the gait characteristics.
3. (Previously Presented) The system of claim 2, wherein said output module comprises at least one of display, alarm, memory storage, communication device, printer, buzzer, PDA, lap top computer, computer, audio or visual alarm, and light.
4. (Previously Presented) The system of claim 3, wherein said communication device comprises at least one of modem, pager, network interface, Ethernet card, serial communications port, parallel communications port, telephone, and PCMCIA slot and card.
5. (Original) The system of claim 1, wherein said sensor module and processor module are in wireless communication.

6. (Previously Presented) The system of claim 5, wherein said wireless communication comprises at least one of RF link, an infrared, cellular phone link, optical and electromagnetic.
7. (Original) The system of claim 1, wherein said sensor module and processor module are in a hard wired communication.
8. (Previously Presented) The system of claim 7, wherein said hard wired communication comprises at least one of electronic, integrated circuit, electromagnetic, wire, cable, fiber optics, a phone line, twisted pair, and coaxial.
9. (Original) The system of claim 1, further comprising: a rate-of-travel detector to determine the rate-of-travel of the subject.
10. (Previously Presented) The system of claim 9, wherein said rate-of-travel detector comprises at least one of a plurality of beam breaks, floor switches, and door switches.
11. (Previously Presented) The system of claim 9, wherein said rate-of-travel detector comprises at least one of ultrasonic communication, IR communication, laser communication, ground radar communication, wide band radar communication, and doppler communication.
12. (Previously Presented) The system of claim 9, said gait characteristics of the subject includes at least one of step count, pace, normal condition, limp, shuffle, falls, average walking velocity, step length, and stride length.
13. (Previously Presented) The system of claim 1, said gait characteristics of the subject includes at least one of step count, pace, normal condition, limp, shuffle, and falls.

14. (Previously Presented) The system of claim 1, wherein the gait characteristics of the subject includes falls.
15. (Previously Presented) The system of claim 1, further comprising an archival storage module.
16. (Previously Presented) The system of claim 15, wherein said archival storage module stores at least one of longitudinal analysis of gait characteristics, pattern recognition, and identification determination.
17. (Previously Presented) The system of claim 16, wherein said processor module analyzes the gait characteristics, pattern recognition, and identification determination data
18. (Previously Presented) The system of claim 1, further comprising: a second processor module, wherein said second processor module analyzes the gait characteristics, pattern recognition, and identification determination data.
19. (Previously Presented) The system of claim 1, wherein the subject is one of a human and an animal.
20. (Previously Presented) The system of claim 1, wherein the subject is an animate or inanimate object.
21. (Previously Presented) The system of claim 1, further comprising a fall module that processes data received from said acceleration, vibration, and deflection module.
22. (Previously Presented) The system of claim 1, further comprising a step module that processes data received from said acceleration, vibration, and deflection module.

23. (Original) The system of claim 1, further comprising: a second processor module in communication with said system.

24. (Currently Amended) A method for monitoring gait characteristics of a subject, said method comprising:

detecting at least one of floor acceleration, floor vibration, and floor deflection to provide acceleration, vibration, and deflection signal, wherein said detecting step is provided by a sensor module touching the upper surface of a floor, and wherein the subject walks on the upper surface of the floor in proximity to said sensor module; and

analyzing the acceleration, vibration, and deflection signal for determining gait characteristics.

25. (Previously Presented) The method of claim 24, further comprising: outputting data indicative of the gait characteristics.

26. (Previously Presented) The method of claim 25, wherein said outputting is provided by an output module that comprises at least one of display, alarm, memory storage, communication device, printer, buzzer, PDA, lap top computer, computer, audio or visual alarm, and light.

27. (Previously Presented) The method of claim 26, wherein said communication device comprises at least one of modem, pager, network interface, Ethernet card, serial communications port, parallel communications port, telephone, and PCMCIA slot and card.

28. (Original) The method of claim 24, further comprising: detecting rate-of-travel of the subject to determine the rate-of-travel of the subject.

29. (Previously Presented) The method of claim 28, wherein said detecting the rate-of-travel is provided by a rate-of-travel detector.

30. (Previously Presented) The method of claim 28, wherein said detecting the rate-of-travel comprises at least one of ultrasonic communication, IR communication, laser communication, ground radar communication, wide band radar communication, and doppler communication.

31. (Previously Presented) The method of claim 28, the gait characteristics of the subject includes at least one of step count, pace, normal condition, limp, shuffle, falls, average walking velocity, step length, and stride length.

32. (Previously Presented) The method of claim 24, the gait characteristics of the subject includes at least one of step count, pace, normal condition, limp, shuffle, and falls.

33. (Previously Presented) The method of claim 24, wherein the gait characteristics of the subject includes falls.

34. (Original) The method of claim 24, further comprising: storing archival information-or data.

35. (Previously Presented) The method of claim 34, wherein the storing of archival information or data is provided by an archival storage module that stores at least one of longitudinal analysis of gait characteristics, pattern recognition, and identification determination.

36. (Previously Presented) The method of claim 35, further comprising: analyzing the gait characteristics, pattern recognition, and identification determination data.

37. (Previously Presented) The method of claim 24, wherein the subject is one of a human and animal.
38. (Previously Presented) The method of claim 24, wherein the subject is an animate or inanimate object.
39. (Previously Presented) The method of claim 24, further comprising: analyzing fall data received from the acceleration, vibration, and deflection signal.
40. (Previously Presented) The method of claim 24, further comprising: analyzing step data from the acceleration, vibration, and deflection signal.
41. (Currently Amended) A computer program product comprising computer usable medium having computer logic for enabling at least one processor in a computer system to monitor gait characteristics of a subject, said computer logic comprising:
- detecting at least one of floor acceleration, floor vibration, and floor deflection to provide acceleration, vibration, and deflection signal, wherein said detecting step is provided by a sensor module touching the upper surface of a floor, and wherein the subject walks on the upper surface of the floor in proximity to said sensor module; and
- analyzing the acceleration, vibration, and deflection signal for determining gait characteristics.